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HEARINGS

BEFORE COMMITTEE ON INSULAR AFFAIRS,
U.S. HOUSE OF REPRESENTATIVES

FORESTRY MATTERS IN
THE PHILIPPINES

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FORESTRY MATTERS IN THE PHILIPPINES.

COMMITTEE ON INSULAR AFFAIRS,
HOUSE OF REPRESENTATIVES,
Wednesday, February 19, 1908.

The committee met at 10.30 a. m., Hon. Henry A. Cooper, chairman, presiding.

STATEMENT OF GEORGE P. AHERN.

The CHAIRMAN. You are a retired officer of the United States Army?

Major AHERN. Yes, sir; a major.

The CHAIRMAN. What is your present official position under the United States Government?

Major AHERN. I am director of forestry in the Philippine Islands.

The CHAIRMAN. And have been in that position how long?

Major AHERN. Arrived in the islands April, 1899.

The CHAIRMAN. Continuously?

Major AHERN. Practically continuously; every three years I have taken a leave of absence.

The CHAIRMAN. And how long in charge of forestry matters in the Philippines?

Major AHERN. Practically since April, 1900, when I organized the bureau of forestry.

The CHAIRMAN. Have you been thoroughly over the archipelago?

Major AHERN. Yes, sir; from one end of it to the other.

The CHAIRMAN. Will you please go on in your own way and give us such facts in relation to the matter as may be important for the committee to know concerning the forestry service in the Philippines? Give us all the information that you have on the subject which you think might interest the committee.

Major AHERN. The Spanish Government had a forestry bureau before American occupation for about thirty-five years, from 1863 up to 1898, and had done some work. They had enacted some good forest laws and I practically continued the forest law after 1900, with but few modifications. I found that they had done but little that would be of interest to lumbermen. I got such facts and figures as I could from the lumbermen, and I got together a few Spaniards and Filipinos who had been in the former forest service and tried to do something toward building up a bureau of forestry. At first I devoted most of my time and interest to the issuing of licenses and the inspection of the operations of the lumbermen. Under the regulations no one can cut timber out there unless he has a license. I devoted my attention to matters of revenue and therefore had very little time for scientific investigations.

In Spanish times the revenues from the office about equaled the cost of the bureau. I found that their revenues barely paid the

expense of the office. During the first five years our revenues amounted to 2,000,000 pesos. The islands are smaller than the State of Montana, or something over 120,000 square miles.

The CHAIRMAN. You are speaking of the revenues from the forests?

Major AHERN. Yes; from the sale of forest products, which amounted to about 2,000,000 pesos or about \$1,000,000.

Mr. MCKINLAY. Per year?

Major AHERN. No; for five years. The bureau costs less than 50 per cent of the revenue. They turned over 1,000,000 pesos into the treasury during the first five years. After five or six years of this work I cut down the stumpage charges that had been heretofore granted, so that the revenues declined from 600,000 pesos the previous year to 200,000 pesos last year. The stumpage charges in the islands ran from \$1 to \$5 per 1,000. This timber sells in the market in Manila from \$35 up to \$175 per thousand board feet. In this calculation I use American money and I will speak of it in dollars and cents.

We use in the Philippines from 80,000,000 feet to 100,000,000 feet of lumber per year. One-half of this amount is native lumber. The other lumber comes from the United States and from Australia. An agent of an Australian company was in my office the other day, and he reminded me that he did not think we had much native lumber because they were getting so much from Australia. I told him the reason of that was the lumber could not walk and had to be transported and that we had not sufficient facilities for that purpose. As a matter of fact we have had inadequate transportation since the American occupation.

Two years ago I transferred a large part of the administration work to the bureau of internal revenue, leaving to our bureau the handling of the forests, and I began making investigation to find out what we had. The first work was started in the northern part of Negros, where a tract of land had been granted to the Insular Lumber Company. They had been given the exclusive right to operate over a territory of 69 square miles. This section was considered to be of no value by the Filipinos. I found that about 90 per cent of it constituted a good stand of timber and numbering six different species of trees.

Mr. OLMSTED. Ninety per cent of what?

Major AHERN. Ninety per cent of the merchantable timber could be cut from six different species of trees, and readily marketable in Manila at \$35 per thousand feet and up. They are allowed to cut the timber measuring from 20 inches in diameter up. We made an estimate of this stand of timber, and we determined that these forests contained timber above 20 inches in diameter to the value of about 88,000,000 pesos or \$44,000,000. The stumpage charge on this tract averages \$1.20 a thousand. The wood is moderately hard, much of it is equal to the Oregon pine, which is used for construction. We allow only that above 20 inches in diameter to be removed. The value of that is \$44,000,000 in gold.

Mr. MCKINLAY. You speak of the price at Manila?

Major AHERN. Yes, the bottom price is usually \$35. This is clear stuff, and that is brought into the Manila market. They let stand everything below 20 inches in diameter. Even after that size timber

is cut the forest still looks like a virgin forest. It can be gone over again in a few years.

One mill on this tract cuts between fifty and sixty thousand feet per day and another mill of the same company on this tract cuts twelve thousand feet per day. At that rate it would take over forty years to cut all the timber that is now mature and ready to remove. This area I speak of is 69 square miles.

There is another section containing about 100 square miles containing timber of about the same character. The forest officers are now studying forest tracts so as to induce some lumber companies to go to the Philippines and get out that timber.

We make a contour map of about 100 square miles or more. We spent from \$3,000 to \$5,000 in securing the data, in order to give logging companies information so that they could figure on it. We have the market prices outlined; that is, the present prices. I have been giving prices and information in talks to the chambers of commerce in Detroit and Chicago.

In the islands to-day we have not a single company that has had any previous experience in logging. This insular company of which I speak has a proposition that is as good as a gold mine, but it is managed by a promoter who has had no experience in logging, and in spite of his lack of experience the company is making money. The second company was managed by Mr. Gibson, one of the ablest business men in the islands to-day. He has, however, never had anything to do with logging in the United States. Those are the two leading concerns. The result is that we have never had any people in the Philippines who have had experience before in logging in this country, and therefore it has been found to be a poor business proposition. One of the men working under this promoter who was connected with the insular lumber company was an experienced logger in the United States, and he went over the proposition with me. But he was dissatisfied and he said that he would have to get out. He said he was under the orders of the promoter. I imagine that he is gone by this time.

Mr. FORNES. Have you a market for the lumber that you get there?

Major AHERN. Yes, we have a market in the Philippines for 100,000,000 feet per year. We are forty-eight hours from Hongkong, or from the Chinese coast. Shanghai took about 85,000,000 feet of Oregon pine last year. We are about 900 miles from Shanghai. They also send lumber to Australia from the Pacific coast.

Mr. MCKINLAY. What wood do they use as a substitute for the Oregon construction wood?

Major AHERN. This is called lauan.

Mr. MCKINLAY. That is suitable for construction work, bridges, etc?

Major AHERN. Yes, we have a machine in Manila for the purpose of making tests. It will test up to 200,000 pounds.

Mr. MCKINLAY. Can you get the same size of timber as you can of the Oregon pine?

Major AHERN. We can take out timber 60 inches in diameter. We do not let them cut any under 20 inches on the Negros tract.

Mr. MCKINLAY. What is the square that it will cut?

Major AHERN. From 36 to 40 inches.

Mr. PAGE. Sixty-six inches will square 45 inches.

Major AHERN. They do not use that sized logs in the Philippines.

Mr. FORNES. You get it large enough to make boats and other things.

Major AHERN. Yes, I saw a boat 90 feet long and 5 feet wide made from one piece of wood.

The CHAIRMAN. Explain a little more about your testing machine.

Major AHERN. We have a large machine which is capable of testing the strength of the wood, so as to give constructors and engineers some idea of the relative values of the timber. We have a list of the tests made of American wood and we have a bulletin of the tests which have been made by our bureau. The principal native woods have been subjected to about one thousand tests so as to get a fair idea of their strength. The woods of lesser importance are subjected to 400 or 500 tests made in this way, so that we have a fair idea of the strength of our native woods. That has never been done before. The English have made some tests in India but they have never made them on the large scale that we have made them.

The CHAIRMAN. What do you find as to the strength of the wood?

Major AHERN. The lauan, which is the wood similar to the Oregon pine, has proven satisfactory and we also have wood as strong as hickory.

Mr. LARRINAGA. What kind of a test do you give, a crushing test or a test to show the tensile strength?

Major AHERN. We test both. We put in a stick which is 60 inches long and 4 by 5 inches in cross section, and subject it to a cross-bending test. The compression test is made on blocks about 5 inches cube.

Mr. LARRINAGA. What resistance does this show?

Major AHERN. We have a wide range of figures on that. They are all given in this bulletin.

Mr. LARRINAGA. I was referring to that wood which compared with the Oregon pine. I know you have a vast number of varieties of wood. I refer to the wood that you use for construction in the Philippines.

Major AHERN. The compression test of the lauan averaged about 5,000 pounds per square inch.

Mr. LARRINAGA. The tensile strength was how much?

The CHAIRMAN. Mr. Larrinaga is an engineer.

Major AHERN. I would have to look over the bulletin.

The CHAIRMAN. You can put that in the hearing when you get a transcript of your notes.

Major AHERN. The strength of the lauan runs from 7,000 to 14,000. The test of the lauan averaged about 5,730 pounds. Another series of tests of this wood averaged 7,340 pounds. That contained about 20 per cent of moisture; the former tests were on lauan with 35 per cent of moisture.

Mr. LARRINAGA. What about the wood that is used for railroad ties?

Major AHERN. The wood which we have used shows excellent results. The Dagupan railroad was built about fifteen or eighteen years ago. They took up some ties, and we got a specimen of one tie that had been down about twelve years, and it had not been phased in the slightest degree. They were simply changing the tracks, and we picked up this specimen and saved it in order to have it as a sample.

Mr. LARRINAGA. What are the names of the three specimens that you have alluded to?

Major AHERN. The names are ipil, molave, and yacal. These three specimens are wonderfully strong. I have seen specimens of molave which had been in a house for one hundred years, and it could be taken out and put in another house, and it would last another hundred years.

Mr. JONES. Is it not a fact that there is an insect in the islands which attacks many different classes of timber?

Major AHERN. Yes, sir; that insect is called the white ant.

Mr. JONES. It will destroy timber in quite a short time?

Major AHERN. Yes; they cut right through it.

Mr. JONES. What class of timber is it that they attack?

Major AHERN. They attack the lauan. That happens where the white ant is found in sufficient number. It happens in particular localities. When that happens we find that the report gets around very quickly that the wood is being eaten through, and everybody knows all about it. The white ant, however, is only found in particular sections.

Mr. PAGE. Is the white ant found in sufficient numbers to become a menace?

Major AHERN. It is a menace to the lauan in sections where it is found in considerable numbers. We experimented with two of the cheaper woods for use as railroad ties, lauan and apitong. We dipped them in carbolinsum and placed them in the railroad yards where they were at times under water. We found that after eight months' use these woods had not been changed in the slightest.

Mr. JONES. Why is it that the railroad ties being used now are practically all from Australia?

Major AHERN. It is simply because there is no one to fill contracts. There is a thousand million feet increase in growth in the Philippine forests per year. There is no one to get it out. A company will say that it would like to have 500,000 railroad ties, but there is no one who is willing to undertake the contract. There is no great logging company with sufficient plant or capital to undertake a big contract. The result is that they have to go to Australia or to America for these things.

Mr. JONES. What does this Oregon lumber cost in Manila?

Major AHERN. The price has now gone up. It can perhaps be landed in Manila for \$23 to \$24 per thousand. I believe it sells for as high as \$30 to \$35 and \$37 a thousand feet. That is used as building material.

Mr. FORNES. That is 30 per cent profit?

Mr. AHERN. It is selling for about that price.

Mr. FORNES. Have you anything there that is suitable for making paper pulp?

Major AHERN. Yes, we have sent some here for examination. I have been talking to some of the paper pulp people, and I have been getting the names of some houses to which I could send some samples for examination. We have made some fairly good paper from it. I am anxious to have it tested for that purpose.

The CHAIRMAN. You say that you are not allowing them to cut any timber below 20 inches in diameter.

Major AHERN. Yes, on the tract in Negros the company does not cut below 20 inches in diameter for the purpose of affording protection to the other growing timber; in the islands we usually allow them to cut as low as 16 inches.

The CHAIRMAN. That is for the purpose of preservation?

Mr. AHERN. Yes, sir.

The CHAIRMAN. You intend, I suppose, to carry on a scientific forestry service system?

Major AHERN. Yes, sir.

The CHAIRMAN. Does the timber grow rapidly?

Major AHERN. Yes; our pine grows rapidly, attaining a diameter of over 12 inches in twenty years. I have made a study of that in the province of Benguet. It would probably take from thirty to forty years in the United States to grow that same size of pine.

The CHAIRMAN. It is your idea to carry out such a system as will always give proper timber for export and at the same time leave a sufficient quantity for the replenishing of the forest all the time?

Major AHERN. Yes, sir. Under our method of operation each cutting improves the forest. That can go on for a hundred years, and at the end of that time it will be more valuable than it is to-day. This 69,000 square miles that I speak of is public forest.

The CHAIRMAN. Is your system analogous to the system employed in Germany?

Major AHERN. No, sir. They have what is called pure stands of timber. We have as many as 500 different species on 10,000 acres.

The CHAIRMAN. The slowness of the development is attributable to the want of transportation facilities?

Major AHERN. Exactly.

The CHAIRMAN. When these railroads are built will not those facilities be a good deal improved?

Major AHERN. The railroads are going through the part of the country that is not well wooded. In the sections where the railroads are located the timber was cut away many years ago. In the parts of the country where the population is heavy to the square mile you do not find much timber. Wherever you find much population you do not find much timber. There are probably in the islands 60,000 square miles of timber. In Negros the railroads run close to a large area of timber, but I understand the railroad people are going to stop before getting to where timber can be gotten out, so that their transportation facilities will not avail very much.

The CHAIRMAN. Have you made any computation as to the amount of timber there that could be cut, say timber over 16 inches?

Major AHERN. Over 20 inches. We have probably half a dozen tracts to which we have given careful study. I have a man whom I have given charge of a certain territory in the Moro country. There is a section in the nothern part of Zamboango where we have sent a field party with the idea of getting some information as to the stand of timber. This man placed in charge of this examination is a graduate of Yale and is very competent for the purpose. I will find a report on that subject probably on my desk when I return.

I got a preliminary report on that subject, but I do not care to make it public simply because I did not believe it. I sent a large field party to make the examination. That party arrived on the tract last November, and will make a careful study of the stand of merchant-

able timber. An engineer will make a very careful contour map, and when I get back I suppose I will be able to find a thorough report on the subject.

Mr. JONES. How are you going to ship this timber? I understand that the landing places are shoal.

Major AHERN. In Negros the mill is up the river about 7 miles, and the lorcas go alongside and load up with lumber and take it to Manila.

Mr. JONES. As a matter of fact, there is no harbors.

Major AHERN. No, sir. There is a fairly good harbor at Escalante.

Mr. JONES. What is the depth of water at that harbor.

Major AHERN. At low tide it is about 12 feet over the bar.

The CHAIRMAN. Please point out on the map the different forest tracts.

Major AHERN. In Mindoro we have about 4,000 square miles. Where the population is high the timber is cut away. The largest available forest tracts are found in Mindanao, Mindoro, and Negros.

Mr. FORNES. This would perhaps be more valuable in one hundred years. How long before it will be available for the purpose of transportation?

Major AHERN. In a few years. Some have been cut within the last five years. In less than fifty years it will be ready to cut again.

Mr. OLMS TED. Is it not true that when you cut large trees, there is a certain amount of brush remaining, and is there not danger that through fire the growing timber will be destroyed?

Major AHERN. No, there is too much moisture.

Mr. OLMS TED. Do you have forest fires?

Major AHERN. Yes, the forests are set afire sometimes by men. Men will sometimes go into the forest and cut down 15,000 to 30,000 pesos worth of timber to clear a place large enough to raise \$100 worth of rice. In two or three years they will cut down more trees of the same value to raise another hundred dollars worth of rice.

The CHAIRMAN. You do not permit that now?

Major AHERN. We try to stop it. These people generally work under the orders of a person called the principale.

The CHAIRMAN. Point out on the map the various tracts of forest.

Major AHERN. One is in North Zamboanga.

Mr. GARRETT. This is all public land?

Major AHERN. Yes, sir.

Mr. GARRETT. They cut the timber and pay the Philippine government.

Major AHERN. They pay for the timber as it is cut. In this country they pay in advance, but in that country they are so poor that we make them pay after the timber is cut.

Mr. FORNES. It is virtually a first lien?

Major AHERN. Yes, sir.

Mr. OLMS TED. How far is this timber from Manila?

Major AHERN. It is about 600 miles or more by water. Boats come in there from Singapore.

The CHAIRMAN. I read in the newspapers that there has been established a line to Zamboanga which goes to Hongkong.

Major AHERN. Yes.

The CHAIRMAN. What is the name of that island you have just pointed out on the map?

Major AHERN. That is Mindanao, which is 40,000 square miles in area. A large part is covered by heavy timber. In one part, called the Agusan Valley, I had a man for about four months studying that tract. It is a valley of more than 5,000 square miles in area and is one of the most fertile regions in the world.

Mr. FORNES. How is it as to the climate? Is it not rather warm?

Major AHERN. Yes, but it is healthy. I have traveled in every quarter of the Philippines, and I have never been sick. It depends on the way one takes care of himself.

The CHAIRMAN. That island is under Mohammedan rule.

Major AHERN. A large number of the natives are Mohammedans.

The CHAIRMAN. The inhabitants are semisavage.

Major AHERN. Yes, sir. I have a map of that island. This map shows the Christian, Mohammedan, and wild population. That part of the map in pink is Christian, the other part is the wild population, and this [indicating] is the Moro. Of the 7,500,000 people in the islands, about 7,000,000 are Christians. There are about 277,000 Moros who are almost all Mohammedans.

Mr. FORNES. By Christians you mean those who have churches and schools.

Major AHERN. Those that are civilized. They go to church and have schools.

Mr. FORNES. What is the condition of the people now, are they improving?

Major AHERN. Yes, sir; they are improving rapidly. The people are showing confidence by going into the country and taking up homesteads. The people of our bureau are trying to keep in touch with the people. We help them to select places for homesteads and to be independent of the principal, and to make them feel that he can not get their home. Their wives are also taught to feel the same way.

Mr. PETERS. Can these streams be used to get the logs down to the mill?

Major AHERN. Yes, sir. The question of the possibilities of logging is the first thing looked into.

Mr. OLMFSTED. What about the labor conditions?

Major AHERN. They get good labor. The Filipino is valuable as a laborer. The first line that I got on that was from the J. D. White Co. who built an electric line in Manila. This company has built in China and in other places. After he had built 40 miles of line in Manila the company stated that the Filipinos were fine laborers. They had also been used in handling the wire cable system of logging and I have seen Filipinos transferring 50-horse-power donkey engines in the woods and handling over half a mile of wire cable at wages run from 75 cents to \$1.25 per day—work that paid \$5 to \$7 per day on the Pacific coast.

I had some little experience with the Philippine laborer myself in going down one of the rivers. It was a four-day trip. I would start quite early in the morning, at daybreak, and had my breakfast at about 4.30. I would ask the Filipino workmen who had to draw my boat to have breakfast, but they declined to dine so early. At about 8 o'clock I again asked them to pull ashore and cook some rice and have breakfast, but they still declined. They rowed my boat for seven hours in the blazing sun without anything to eat. That would have killed a white man. I was always ready to give them something to eat, but they preferred to go on with the journey.

The CHAIRMAN. There was some complaint that the Filipinos were uncertain laborers. Was not that attributable a great deal to the fact that they did not get their pay regularly?

Major AHERN. Yes, sir; but the Filipino cares very little for money.

The CHAIRMAN. But when he earns it he wants to be sure he is going to get it. When working for an American he gets it.

Major AHERN. When a Filipino is working for you and you do something he does not like, he will get up and walk off and never ask for his money. If you have a Chinaman working for you, he will stay around until he gets his money. Some people do not pay the Chinese until four or five days after the end of the month because otherwise they might walk away and leave the job.

Mr. PAGE. That has been our experience and practice in the South with the negro laborer.

Major AHERN. The Filippino does not care for money. He gets wages running from 50 cents to \$1.25 when he is working in the lumber yard and in the woods, in the sugar haciendo. Another man alongside will get 12½ cents. They get all kinds of wages.

The CHAIRMAN. What do you consider the most valuable kind of lumber in the islands?

Major AHERN. The most valuable is the molave, which is the construction timber.

The CHAIRMAN. You have a hard, yellow timber there?

Major AHERN. Yes, that is the yacal.

Mr. LARRINAGA. You have a wood there that is as hard as stone?

Major AHERN. Yes, sir.

Mr. LARRINAGA. What is the name of that wood? They make spearheads and handles for implements with it.

Major AHERN. The palma brava is used for spear handles and for bows. That is found all over the islands. We have woods like ebony, known as Camagen and bolongeta; they take a fine finish. I went into a place in New York where they were using this class of wood for the purpose of making brush handles, bases for inkstands, and things of that sort. They were getting this wood at a high price from Central and South America, and I told them that I had found them using that in the Philippines for making corduroy roads.

Mr. OLMSTED. What is the cost of transporting this Oregon wood when delivered in Manila?

Major AHERN. It is \$10 to \$14 per thousand.

Mr. OLMSTED. Is there any market for very much of this valuable Philippine wood?

Major AHERN. Yes, sir; there is a market for it in China and in the Philippine Islands, and also in Australia, as a matter of fact. The American market would take the high grade cabinet wood. A good many kinds of native wood could be used for veneering and for making tool handles.

Mr. FORNES. It could be brought to America and be sold at a profit.

Major AHERN. Yes, sir.

At this point the committee adjourned until to-morrow, Thursday, February 20, 1908.





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